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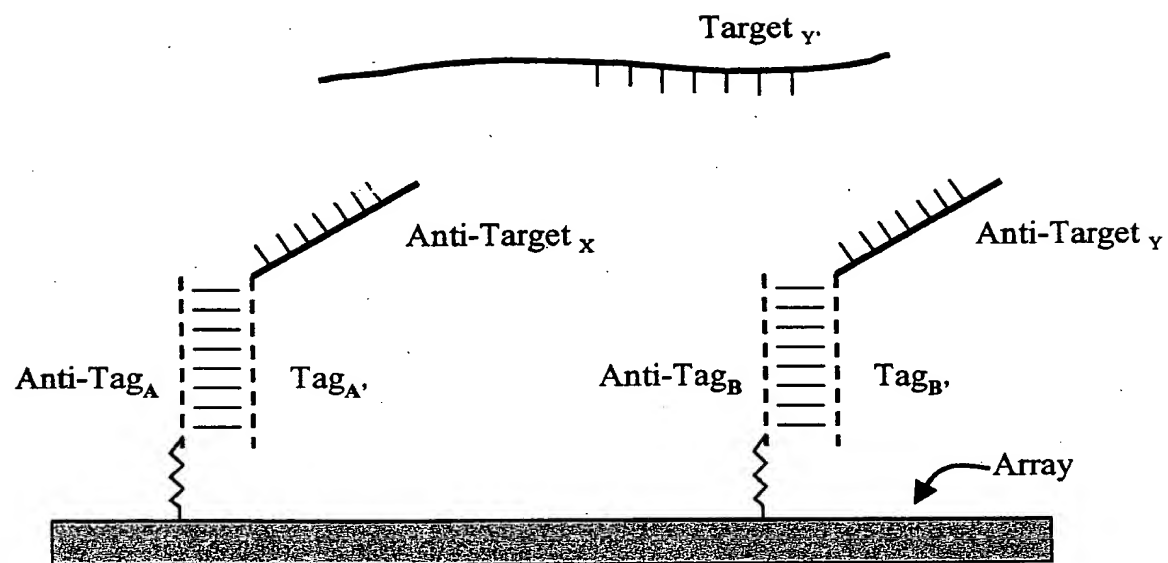
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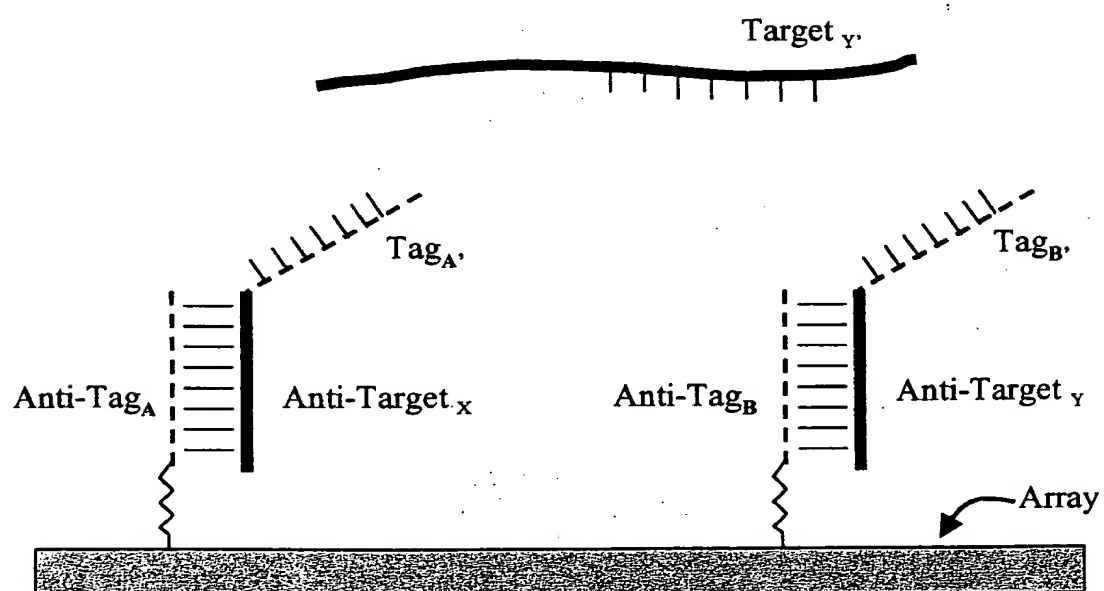
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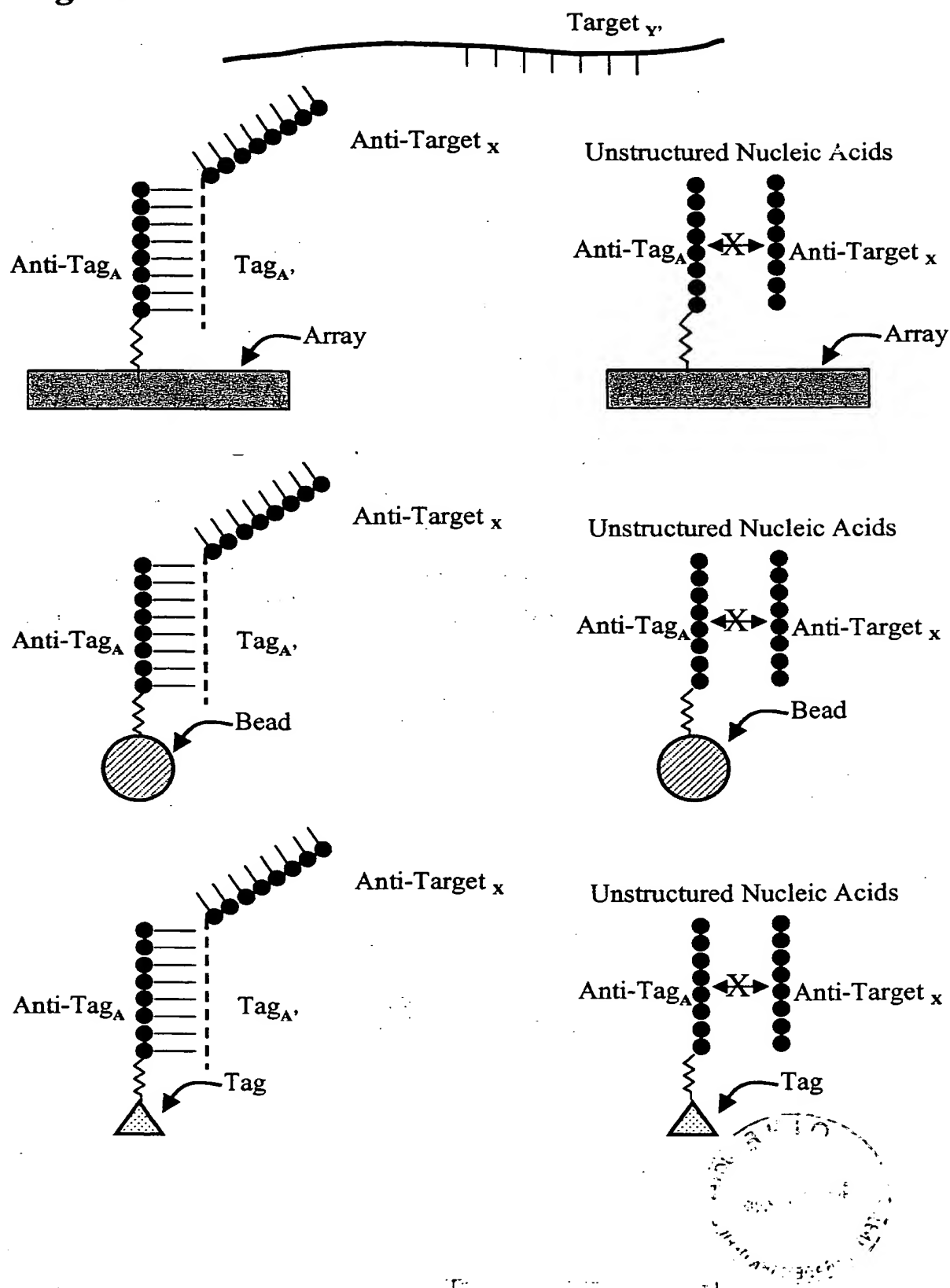
**Figure 1A**



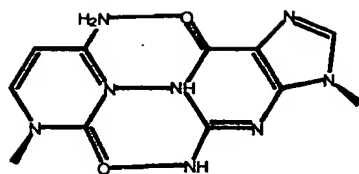
**Figure 1B**



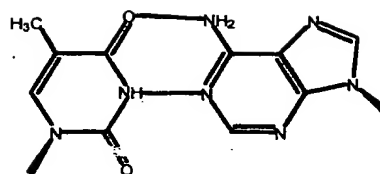
**Figure 2**



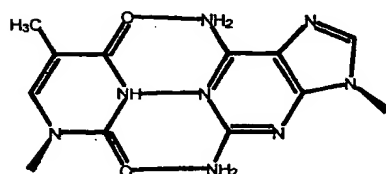
**Figure 3**



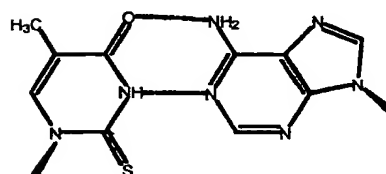
**C - G**



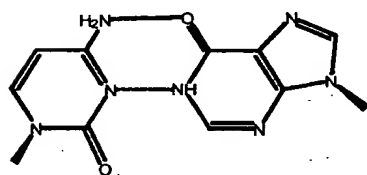
**T - A**



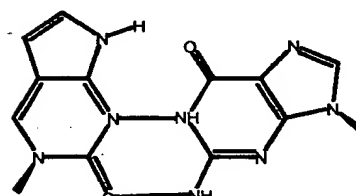
**T - 2-aminoA**



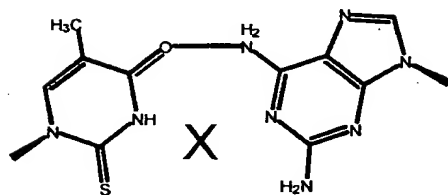
**2-thioT - A**



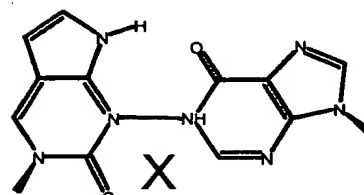
**C - I**



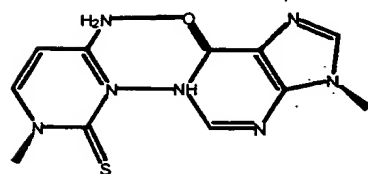
**PyrroloPyr - G**



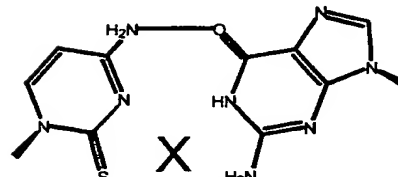
**2-thioT - 2-aminoA**



**PyrroloPyr - I**



**2-thi C - I**



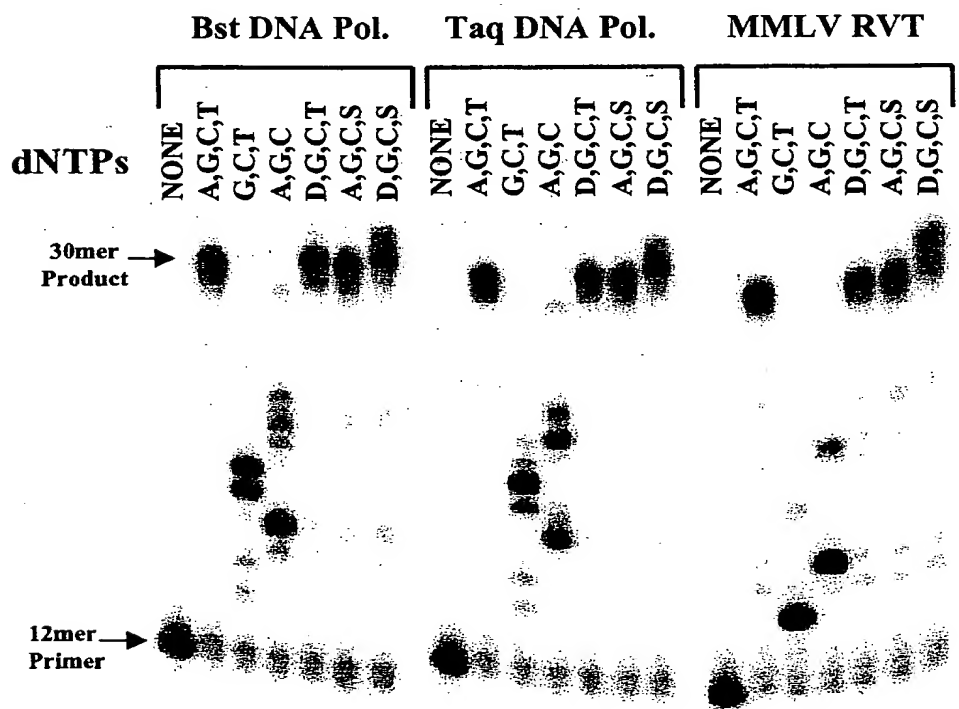
**2-thi C - G**

**Figure 4**

**A**

5' -CGATAGGCTCTG →  
3' -GCTATCCGAGACCCTGACTTGACACCTGTT-5'

**B**

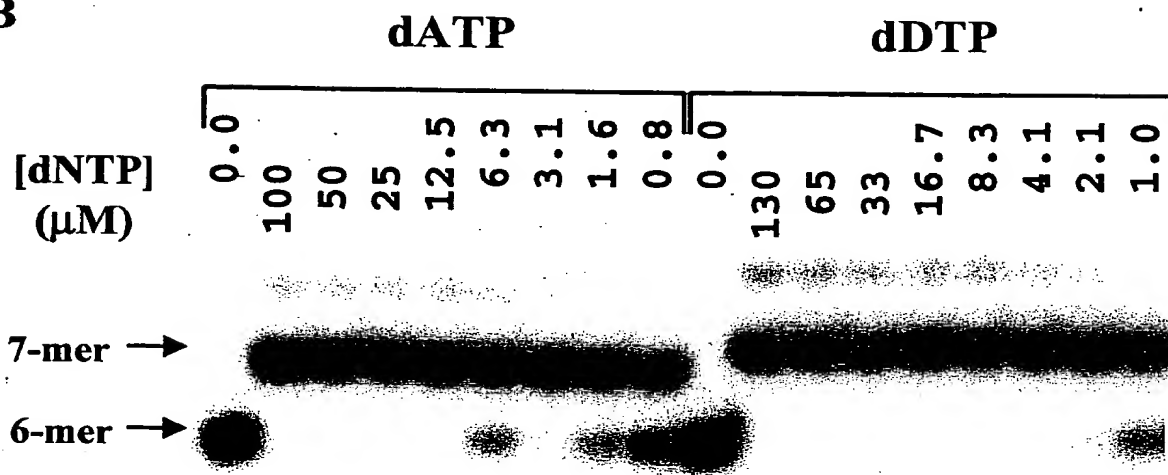


**Figure 5**

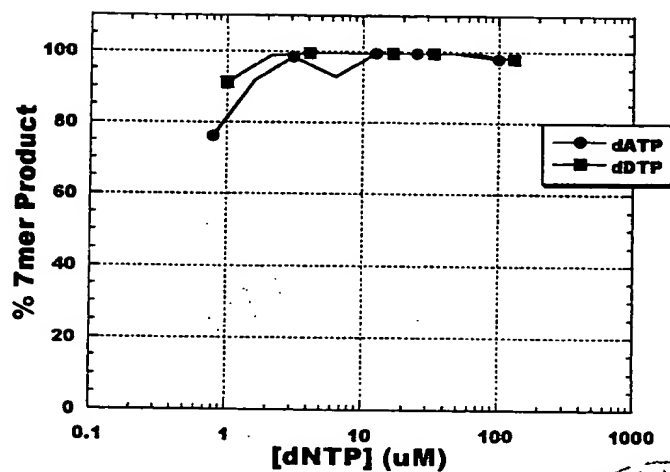
**A**



**B**



**C**

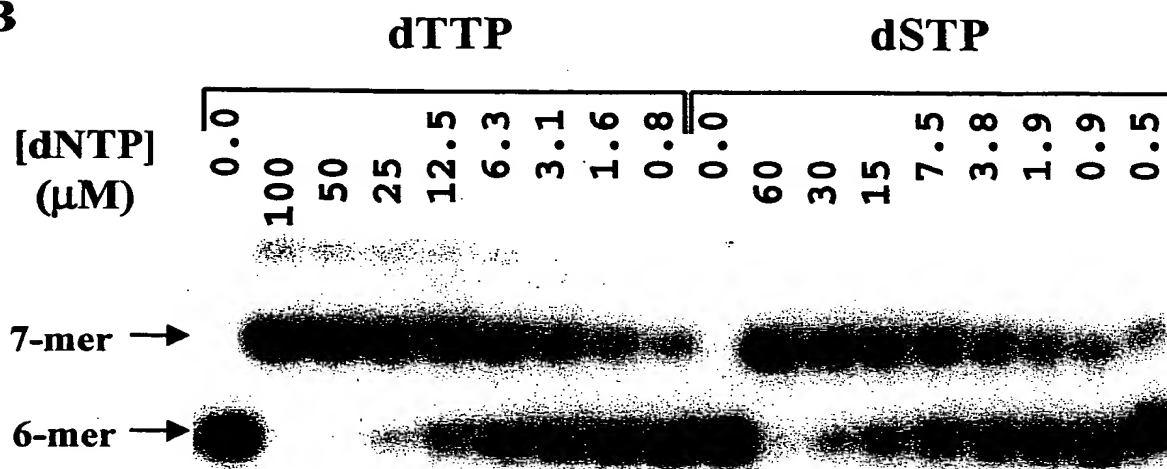


**Figure 6**

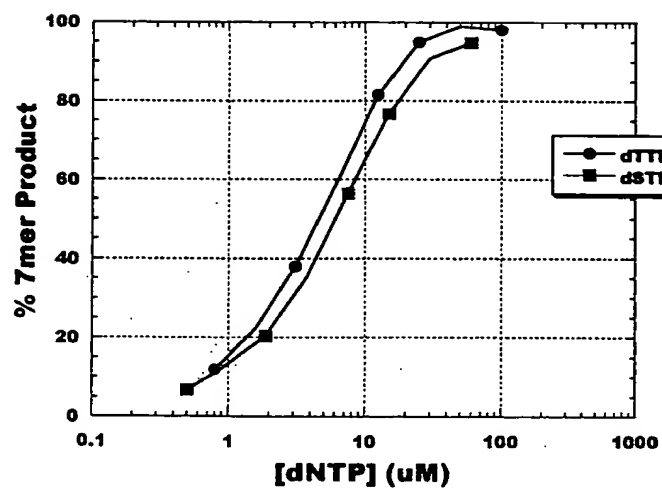
**A**



**B**



**C**

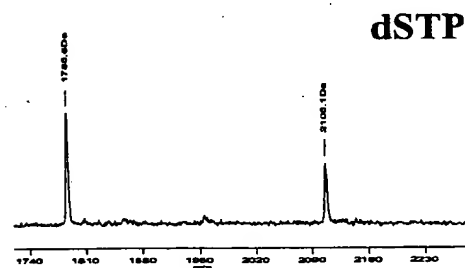
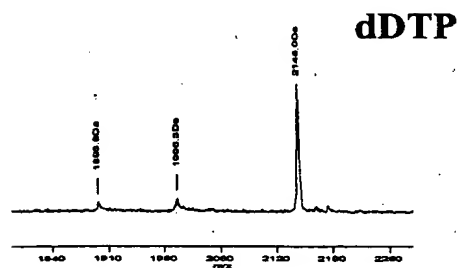
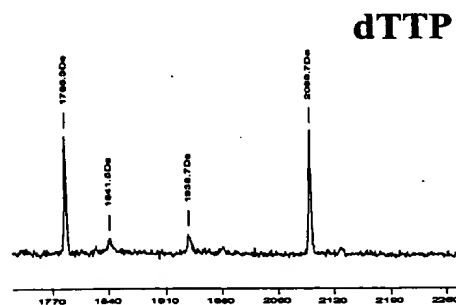
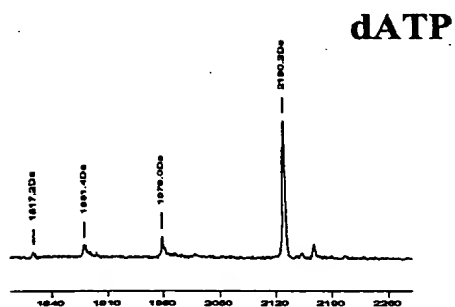


**Figure 7**

**A**



**B**



**C**

Extension Nucleotide	X-mer	Predicted m/z (Positive Ion)*	Measured m/z (Positive Ion)	Predicted $\Delta m/z$	Measured $\Delta m/z$
None	GACTGA	1816.3	nd	--	--
dATP	GACTGAA	2129.5	2130.2	--	--
dDTP	GACTGAD	2144.5	2146.0	+15.0	+15.8
None	GCTCTG	1783.2	1785.4 + 0.2	--	--
dTTP	GCTCTGT	2087.4	2089.7	--	--
dSTP	GCTCTGS	2103.4	2106.1	+16.0	+16.4



**Figure 8**

5' -CTATCCGATCCATC→  
3' -GATAGGCTAGGTAGTTCAAGTCAGAGCTTTGTCAGAGTTGTAAACAGGTGTCGCATp-5'

↓  
dNTPs  
Bst DNA Polymerase

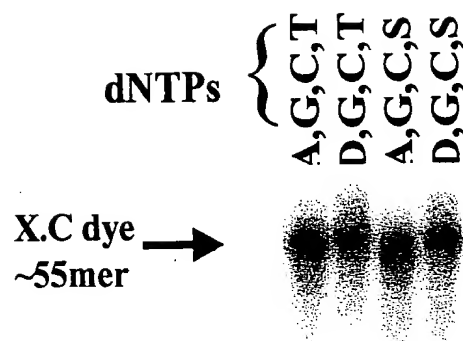
5' -CTATCCGATCCATCaagttcagtcctcgaaacagtcctcaacatttgtccacagcgta  
3' -GATAGGCTAGGTAGTTCAAGTCAGAGCTTTGTCAGAGTTGTAAACAGGTGTCGCAT←

↓  
λ Exonuclease

5' -CTATCCGATCCATCaagttcagtcctcgaaacagtcctcaacatttgtccacagcgta-3'



**Figure 9**



B.P dye →  
~12mer

